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ABSTRACT

This document examines the problems and potentials that cable televisions have in public service, with a view toward understanding CATV's growth and how that growth relates to the developmental and educational needs of the Appalachian Region. Six developmental districts in Appalachia were chosen for intensive study. A team of consultants was organized to perform the research. Statistics were collected by the questionnaire method. Data gathered indicate that: (1) Cable systems that have been 0-500 subscribers have an average market saturation of 60%; (2) Systems with between 501 and 1,500 subscribers have an average 63% market saturation; (3) Cable systems with 1,501 to 3,500 and above have an average market penetration of 62%. This survey also showed that the CATV operators would be interested in participating in a regional cable television network. Upon completion of the research, an engineering report will be issued. (CK)

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CATV IN CENTRAL APPALACHIA

A FEASIBILITY STUDY

Prepared For

KENTUCKY PROGRAM DEVELOPMENT OFFICE
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Frankfort, Kentucky

INTERIM REPORT

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TABLE OF CONTENTS

INTRODUCTION..... 1

Cable TV - Regulatory Evolution..... 1

Applicability..... 2

Production Facilities..... 4

Community Impact..... 4

ORGANIZATION OF RESEARCH EFFORT..... 6

Consultant Team..... 6

Development Districts..... 6

Ad Hoc Advisory Committee..... 6

RESEARCH PROGRESS..... 8

CATV Facilities Survey..... 8

Ownership Structure..... 8

Penetration..... 9

Program Origination..... 10

Programming Survey..... 11

Free film libraries..... 12

Feature Film and Syndicated TV Series..... 13

Church Related Programming..... 13

Instructional Series..... 13

Educational Programming..... 13

Ascertainment of Needs Survey..... 14

CATV Community Development Questionnaire..... 15

Programming Needs..... 15

Area Broadcasters Ascertainment of Needs Survey..... 16

Training Analysis..... 20
Production Training..... 22
ENGINEERING REPORT..... 25
Production..... 25
Film..... 25
Tape..... 26
And Too..... 27
Distribution, Interconnection..... 27
Cable Systems..... 29
Tape..... 29
Microwave..... 30
Telephone Company..... 30
Satellites and Things..... 30
ETV..... 31
Summary..... 31
PROBLEMS..... 33
Funding Delays..... 33
Administrative Difficulties..... 33
RECOMMENDATIONS..... 35
WORK FORECAST..... 40
Development District - CATV Utilization Plan..... 40
Experimental CATV Information..... 41
Alternate Organizational Structures..... 41
Project Calendar - Phase II..... 43
APPALACHIAN COMMUNITY TELEVISION EXPENDITURES..... 44
BREAKDOWN OF EXPENDITURES THROUGH AUGUST 15, 1971..... 45

APPENDIX A..... 46

APPENDIX B..... 47

APPENDIX C..... 50

APPENDIX D..... 51

APPENDIX E..... 56

APPENDIX F..... 60

APPENDIX G..... 70

APPENDIX H..... 72

INTRODUCTION

It hardly needs to be restated here that cable television has a tremendous potential for public service. Undoubtedly, cable can make a significant contribution toward improving the nation's communication system--providing additional diversity of programming, serving as a communication outlet for many who have had little or no access to the television broadcast system, and creating the potential for a host of new communication services.

Likewise, a restatement of the ills that plague Appalachia is, in this context, unnecessary. What is essential, however, is understanding cable television's growth and how that growth relates to the developmental and educational needs of the Appalachian Region.

Cable TV - Regulatory Evolution

For the last several years the Federal Communications Commission (FCC) has been searching for a way of opening up cable's potential to serve the public without undermining the foundation of the existing over-the-air broadcast structure. The mandatory program origination ruling of October 1969, was a step in that direction. The Commission, in August, 1971, presented to Congress a package of rules regarding cable TV. The Commission feels that it's new package will get cable moving quickly to benefit the public, but without jeopardizing the structure of broadcast television.

Essentially, the FCC's plan permits the importation of distant signals into the top 100 market, in return for the cable industries acceptance of the obligation to serve local educational and community needs by providing substantial non-broadcast bandwidth.

The major elements of the FCC's "Public Dividned Plan" are as follows:

A. Minimum channel capacity of 20 channels required in all top 100 markets.

B. Equivalence required. For each broadcast signal carried, cable systems must provide one channel for non-broadcast use.

C. One free, dedicated, non-commercial, public access channel on non-discriminatory basis required under exclusive Federal regulation, without censorship by cable system.

D. One free educational channel required for five years.

E. One free governmental channel required for five years.

F. Two-way capacity required.

If adopted by Congress, this series of rules, plus others, would become effective March 1, 1972.

Applicability

The FCC has singled out the top 100 television markets for special attention. It is the consensus of the cable industry and the Commission, that if cable is to become more than a rural adjunct of the broadcast television system, it must be allowed to expand into centers of concentrated population.

In order to expand into major markets, the cable industry has been allowed use of distant signals as an inducement for building a

viable body of subscribers. The Commission, however, has emphasized that the cable operator cannot accept distant signals without also accepting the obligation to provide substantial non-broadcast channel space for public service.

The Commission has recommended that the following applications be observed of its access rules:

A. The access rules will be applicable to all new systems that become operational in the top 100 markets.

In the area of study, this rule will be in effect if adopted by Congress, when pending franchises are awarded in Chattanooga, Tennessee; Knoxville, Tennessee; and Roanoke, Virginia. These cities fall within the top 100 markets in the country as specified by the FCC.

B. Currently operating systems in the top 100 markets would have five years to comply.

This rule would effect systems in current operation within a 35 mile radius of the three above named markets. For instance, Cleveland, Tennessee, would be included in Chattanooga's market area, Oak Ridge would be included in Knoxville's market area, and Ashland, Kentucky, would be included in Huntington, West Virginia's market area.

C. Existing systems in markets below the top 100 would be required to meet these access rules when and as the system is substantially rebuilt.

This category includes most of the cable television systems operating within the study area of Appalachian Kentucky, Tennessee, and Virginia.

The rather loose wording of this ruling allows for varying interpretations. It is clear, however, that the Commission will not force cable systems that do not now have sufficient channel capacity,

to fulfill it's access regulations. It is unclear, whether systems not in top 100 markets which do have sufficient channel capacity would be required to provide a free access, governmental, and education channel.

Production Facilities

In order to foster it's goal of creating a low-cost, non-discriminatory means of channel access, the FCC will require that cable operator's maintain at least minimal production facilities for public use within the franchise area.

"Hopefully, the Commission states, colleges and universities, high schools, recreation departments, churches, unions, and other community sources will have low-cost video-taping equipment available to the public."

To encourage diversity in program sources, and insure availability, the Commission has made no ruling on technical standards. Furthermore, the Commission has encouraged utilization of ½-inch video tape equipment for program production because of the low cost.

Community Impact

This package of rules, if adopted by Congress, will provide the basic regulatory guarantees needed to safeguard the public interest. The access provisions of the Commission's rules could provide a powerful developmental tool for small communities throughout the Region...an inexpensive open forum for civic dialogue, a means for more meaningful citizen participation in government, and a method for true community-wide education.

The Commission, however, can only make the tools available, they cannot make anyone use them. In recognition of this fact, the new rule package puts the responsibility for programming squarely on the shoulders of the public, government, and education.

The FCC has made clear that the educational and governmental channels are set aside for a developmental phase of five years, and that its decision to expand or curtail such specified access channels will depend upon the innovative usage of those channels during the five year experimental period.

The Commission has further stated, that if the public access, educational, and governmental channels are not used, these channels may be leased for other purposes. This leasing policy is qualified by a provision that the leased channels must revert to their original purpose upon demand.

The intent of the Commission's statements concerning programming is unmistakable. They have encouraged the public to utilize this new and powerful tool, and have, at the same time, put us on warning that if not used, what was given may be taken away.

It is then obvious that the next several years will be formative ones for the future of public usage of CATV. The FCC will be watching and evaluating to see what innovative applications have been made in response to it's access requirements.

Now is clearly the time for planning. Now is clearly the time when communities, local development districts, and the Appalachian Regional Commission itself, should start taking the steps needed to insure that Appalachia will not lag behind the rest of the country, but lead it in the utilization of this new resource.

ORGANIZATION OF RESEARCH EFFORT

Consultant Team

A team of consultants has been organized to perform the research stipulated. Labor has been divided according to areas of specialization. The team consists of an administrator-supervisor, a consultant engineer, a consultant trainer, a financial consultant, legal counsel, and a combination secretary-staff assistant.

Development Districts

Within the study area six local development districts were to be chosen for more intensive study. In Kentucky the Gateway Area Development District and the Kentucky River Development District have indicated their interest in the project, and their willingness to cooperate.

In Tennessee, The First-Tennessee-Virginia Development District and the Upper Cumberland Development District have also, indicated their willingness to participate in the study on a more intensive basis.

In Virginia althouth no official contact has been made through the Office of the Governor, discussions with personnel of the DILENOWISCO Development District indicates that they would be very interested in working with the ACT project. (See Appendix A)

Ad Hoc Advisory Committee

One of the objectives of the "Cable Television-Community Development" meetings held in Kentucky and Tennessee was identification of prospective members of the Ad Hoc Advisory Committee.

Mr. Bill Gorman of the Hazard CATV system and Mr. Earl Crumley of the Middlesboro, Kentucky CATV system will be asked to serve on the committee representing cable TV operators in Kentucky. Representatives from the district boards of the Kentucky River Area Development District and the Gateway Area Development District will be sought to serve on the Ad Hoc Advisory Committee.

In Tennessee, Mr. Ed Bookout of the Bristol CATV system and Mr. Paul Puckett of the Johnson City CATV system will be requested to serve on the Committee. Representatives from the Upper Cumberland Area Development District and the First Tennessee-Virginia Area Development District will be requested to serve on the Advisory Committee representing community interests.

Committee members from Virginia will be designated after the "CATV-Community Development" meeting is held in that state.

RESEARCH PROGRESS

CATV Facilities Survey

Within the study area, there are approximately 105 cable television systems currently operating, serving 136 different communities. Kentucky has the largest number of systems with 56, followed by Tennessee with 25, and Virginia with 24.[1]

The vast majority of these systems are small, having between a few hundred and fifteen hundred subscribers. The Tri-Cities area has the largest concentration of subscribers, within the study area, with a combined subscription strength of over 34,000.[2]

Ownership Structure

The ownership structure of the cable systems in the three states is quite different. Only seven of the fifty-six operating CATV systems in Kentucky are owned by Multiple System Operators (MSO's). Both Tennessee and Virginia however are heavily penetrated by multiple system owned CATV stations. Of the 25 CATV systems operating in Eastern Tennessee, 14 are owned by MSO's. The concentration is even greater in Virginia, with 17 of the 24 operating systems owned by MSO's.

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[1] Broadcasting Sourcebook CATV (Washington, DC: Broadcasting Publications-NC, 1971).

[2] Television Factbook (Washington, DC: Television Digest Inc., 1969-70).

Multiple System Operators have in the past, been much more active in program origination than independents. The activity in the Johnson City-Kingsport-Bristol area, for instance has been aided by the cooperation of two large MSO's, Cypress Communications and National Trans-Video, with efforts of the Development District to begin significant local programming.

Penetration

Statistics on penetration of CATV in the region are difficult to come by. The National Cable Television Association estimates that between 65% to 70% of all homes receiving TV signals in eastern Kentucky are tied into local cable television systems. Nationally it is estimated that the average cable-TV system has a 56% saturation in its market.[3]

Our own statistics, based upon the Broadcasting Sourcebook CATV 1971 and Television Factbook 1969-70 tend to confirm previous estimates. Complete statistics were gathered on 59 of the 105 CATV systems operating within the study area. Our survey reveals that tri-state systems maintain an average market saturation of 64%. This overall figure breaks down thusly; Systems that have between 0-500 subscribers have an average market saturation of 60%. Systems with between 501 and 1,500 subscribers have an average 63% market saturation. Cable systems with 1,501 to 3,500 and above, have an average market penetration of 62%. (See Appendix B)

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[3]Broadcasting Sourcebook CATV 1971, p. 7.

Program Origination

The FCC has set a requirement that all CATV systems with over 3,500 subscribers must cablecast locally-originated programming over one channel (not including "automatic" programming channels) by April 1st of this year. Before this rule was implemented, the courts announced that such a requirement was beyond the regulatory powers of the Commission. (Midwest Video case, 8th Circuit Court of Appeals). The Commission is seeking Supreme Court review of this decision, so there may not be a final answer for a year or more. Meanwhile, of course, the rule will not take effect.

CATV systems are not precluded from voluntarily originating programming, and many of them continue to do so. Although part of the impetus was undoubtedly the FCC's origination rule, it appears that a good many stations will still originate in an attempt to forestall further regulation and to make their programming more desirable to subscribers. As of March 15, (before the origination rule was struck down), the nationwide figures on origination were as follows, according to the 1971 CATV Activity Addenda to Television Factbook of July 5, 1971:

Systems with automatic orig.		1,477
Time and wether	1,026	
News ticker	159	
Music	77	
Stockticker	35	
Systems with local origs.		524
Local live, tape or film	467	
Advertising	57	
Others		164
TOTAL SYSTEMS ORIGINATING		1,190

According to these statistics approximately 19% of CATV systems throughout the country are doing some kind of local program origination. Within the study area approximately 12% of cable systems are currently doing local program origination. (See Appendix C)

Partially responsible for this small figure are the large number of small systems within the study area that have limited channel capacity. For instance, the cable system in Beattyville, Kentucky has a 3 channel capacity. Those three channels provide two commercial TV channels from Lexington, Kentucky, and one commercial channel from Knoxville. There is simply no technological room in this system for a local origination channel.

As the systems with restricted channel capacity are rebuilt and their channel capacity expanded the liklihood of local program origination will greatly increase. If the new FCC rule package is approved by Congress, this will also greatly effect local origination by opening access channels for public use.

The questionnaire that was filled out at both the Kentucky and Tennessee "CATV-Community Development" meetings revealed that many cable operators are planning to begin local origination in the near future.

The CATV operators also responded favorably to the questions concerning cooperative local origination. The majority said they would be interested in cooperating with development districts, community organizations, and outside community service agencies by providing free cable time for free programming.

The survey also showed that the CATV operators would be interested in participating in a regional cable television network.

Programming Survey

In order to determine the programming currently available for CATV distribution a mail survey was taken of some fifty (50) commercial program suppliers and twenty-nine (29) sources for possible educational programming.

Replies were received and classified into the following broad categories:

1. Free film libraries
2. Feature film and syndicated TV series
3. Church related programming
4. Instructional series
5. Educational programming

Free Film Libraries

A great number of films are available from industrial, institutional, and foreign sources that will provide their programming free of charge in order to receive wide public dissemination.

Most films available from free lending libraries are thinly disguised public relations vehicles. They do not provide unique programming for CATV, since most are also available for broadcast. Most are not relevant for community needs in Appalachia.

There are however some worthwhile films available from this source.

Feature Film and Syndicated TV Series

"Ramar of the Jungle" and "Fury" are alive and well in the vaults of commercial program syndicators. These ex-broadcast series and many others are now being offered to cable TV operators for cablecasting.

Feature film packages are also available. Needless to say this kind of programming will not help cable TV operators meet their community needs.

Church Related Programming

Religious programming such as "The Sacred Heart Program" or "Faith for Today" are available free of charge for cablecasting. These programs might be useful, but again, are not distributed solely for CATV use. They are designed primarily for broadcast and are carried widely by broadcast stations.

Nationally distributed religious programs might fulfill a need in a location where local broadcast outlets do not carry this programming.

Instructional Series

A number of direct instructional programs are available to CATV from such organizations as Great Plains National Instructional Television Library and National Instructional Television.

Although instructional programs are shown on daytime ETV, this type of programming might be very helpful in serving particular community needs. For instance, a CATV system located in a town with a single large industry might in conjunction with that industry run an instructional series on job safety for plant employees.

Educational Programming

Although ETV stations, state networks, and related educational programmers will probably be an important source of future CATV programming, they are not now.

Survey replies were received from ETV stations or networks in nine of the thirteen Appalachian states. Many replied that they had no programming available, others suggested programming that would be made available but possible technical, incompatibility problems, others mentioned difficulties in providing programming to CATV systems outside their coverage area.

Program lists were made available by the Alabama ETV Commission; WMUL-TV, Huntington, West Virginia; WWVU-TV, Morgantown, West Virginia; and WGTV, Athens, Georgia. This material was however originally produced for broadcast and in most cases recorded on two inch video tape, the standard broadcast format, but practically non-existent in CATV systems.

National Educational Television (NET) has recently opened its program library for CATV programming. Many of these programs address themselves to important national issues such as drugs, ecology, and poverty. They are being made available at extremely low cost and in a variety of formats.

These programs could be used to give a National-local prospectus on a particular problem. For instance, a NET program on pollution could be immediately followed up by a locally-produced program. In this way the national view of a particular problem could be presented along with the relevant local parts of that problem.

Ascertainment of Needs Survey

Two methods were used to ascertain community needs. A questionnaire was designed to determine community needs and distributed to cable TV operators, development district personnel, and other participants of the Kentucky and Tennessee "CATV-Community Development" Conferences.

An ascertainment of community needs survey was also gathered from broadcast outlets in Kentucky, Tennessee, and Virginia.

CATV Community Development Questionnaire

Part (A), entitled "Community Needs" of the questionnaire was designed not only to ascertain community needs, but to rank the importance of identified problems. This form was adapted from a standard form used by many broadcasters to determine community needs.

Community problems considered to be the most pressing were; (1) education, (2) unemployment, and (3) transportation. Secondary problems identified by respondents included; crime, pollution, racial conflict, health, economic underdevelopment, lack of recreation facilities, lack of adequate medical facilities, local government financing, and water and sewer improvement. (See Appendix D)

All respondents felt that the problems of their community were not unique, but they were shared by other communities within the Appalachian section of their state, and indeed are shared by the rest of the Region.

Programming Needs

Fifty-seven percent of those taking the survey felt that the media was not sufficiently informing local communities about local issues. Of the remaining 43% which felt that the media was sufficiently informing communities of local events, the majority came from large urban areas.

The majority of those taking the survey felt that local program origination by CATV systems, concentrating on health, education, and civil events would help in dealing with the previously mentioned community problems. When asked to rank, in order of importance, five types of programs that a local CATV system might produce, the majority responded

by choosing Local News programs and Instructional programs, ("How To" & "Adult Education") as most important. Instructional programs were also ranked second in importance. Public Affairs (election returns, special issues, telethons) were ranked third in importance, coverage of governmental meetings (city council) was listed as fourth, and local sports (high school, little league) was considered least important.

In reference to Development Districts and cable television those problems stated by Development District Personnel as being of major hinderance to cooperative Development District - CATV programming were: (1) unavailability of CATV, (2) improper or lack of equipment and lack of staff, and (3) financing production. When asked if on site technical assistance in programming utilization, and production would be helpful in stimulating the Development District to begin CATV programming, the majority (75%) replied that it would.

Area Broadcasters Ascertainment of Needs Survey

In their license renewal applications, broadcasters, by FCC regulation, must include results of a community needs survey. This survey is taken within the stations service area by asking local citizens their opinions related to community problems.

For the purpose of our study, we gathered ascertainment of survey forms from radio and television stations located within the Development Districts in each state that is under special investigation.

Below follow the summarized results of those local surveys:

1. GATEWAY AREA DEVELOPMENT DISTRICT

Morehead, Kentucky WMOR - AM & FM

The four problems that stood out most in our survey were: (1) the need of recreational facilities, (2) narrow

streets, (3) drugs, and (4) alcohol, and (5) law enforcement.

Mr. Sterling, Kentucky WMST - AM & FM

Local Problems--growing pains of the community, environmental problems, need for expanded recreational opportunities, juvenile crime, use of alcohol, and drugs.

Bath County

Lack of local industry.

Menifee County

Local Problems--poverty, needs a hospital, sewer system, and entertainment.

Powell County

Flood control problems.

2. KENTUCKY RIVER DEVELOPMENT DISTRICT

Whitesburg, Kentucky WTCW - AM & FM

The significant needs and interests expressed in the survey are as follows: (1) job opportunities, (2) industrial development, (3) sewage system, (4) roads and bridge construction, (5) parking facilities, (6) pollution of air and water, and (7) education.

Hazard, Kentucky WKYH - TV

A cross section of the interviews indicated the following needs in programming this area: (1) an area wide indication of interest and identity, (2) an area wide responsible news coverage, (3) an area wide information type interview, (4) panel type discussions of current events relating to our area, (5) programs of

local cities and counties public affairs, projecting self-help type approach as well as state and federal cost sharing opportunities, (6) cultural and educational programming, (7) area law enforcement program. (8) spiritual type presentation, (9) programs which will tend to encourage the individual and instill in him personal pride and ambition. (Opportunities presented through vocational rehabilitation and training.), (10) programs that will tend to encourage young people through cultural development and personal achievement.

3. FIRST TENNESSEE-VIRGINIA DEVELOPMENT DISTRICT

Tri-Cities (Bristol, Virginia - Kingsport, Tennessee - Johnson City, Tennessee - WCYB - TV

The major needs for this area being: (1) need for awareness of problems and benefits of community cooperation. (2) governmental cooperation and planning to solve problems to avoid duplication of effort, (3) roads and highways, (4) development of recreational and tourist areas, (5) education, vocational training, (6) sewage disposal and treatment, control of industrial pollution, (7) exposing the values of the general area to the outside world to develop further industrial financial growth, (8) housing.

INDIVIDUAL NEEDS OF THE FOUR COUNTIES

Washington County, Virginia

(1) government consolidation, (2) housing

Carter County, Tennessee

(1) schools, (2) roads, (3) sewage treatment

Sullivan County, Tennessee

(1) employment - vocational training, (2) indepth discussion of public issues

Washington County, Tennessee

(1) schools

4. DILENOWISCO DEVELOPMENT DISTRICT

Norton, Virginia - WNVA

(1) improved water system, (2) more schools, (3) development of tourism, (4) improvement of local highways, (5) better housing, (6) recreational facilities, (7) improved medical facilities

Training Analysis

Two levels of possible training activity have become apparent from the preliminary training analysis performed during the first half of the grant period.

Technical Training

Need has been identified, both nationally and regionally for more adequately prepared technicians for the cable television industry. Two years ago, nearly 40 percent of the CATV systems surveyed by TV Communications magazine reported that their technical personnel lacked adequate job skills. TV Communications repeated the survey this year, and reported in its August, 1971, issue that systems reporting inadequately skilled technicians to be down to a figure of less than 30 percent.

TABLE I

AVAILABILITY OF TECHNICAL MEN

Region	Systems Reporting Adequately Skilled Staff	Systems Reporting Inadequately Skilled Staff	Percentage Reporting Inadequate Technical Skill
Northeastern States	26	12	31.9%
Southern States	41	11	21.1%
Midwestern States	37	14	27.4%
Western Mountain States	30	16	34.8%
All Systems	134	53	28.3%

These statistics however, may prove misleading, when considered in light of industry growth patterns and trends in the unemployment level across the nation. If jobs become easier to find in general, and as system construction begins to boom again, the need for skilled technicians may become readily apparent.

Because CATV is relatively new technology, cable operators cannot draw from a labor pool of trained or experienced men. Even if an operator sets out to "steal" an experienced man, he must recruit outside of his own community. Thus, most operators simply hire the most promising trainee they can find locally.

The best the operator can hope for is a man with some vocational training or on-the-job experience in electronics. Only about one out of four men currently employed by the systems surveyed in the TV Communications study had CATV experience when hired. Better than half had some type of electronics experience and a similar number had some formal training in electronics. Four out of five were hired from within the system's community.

TABLE II

EXPERIENCE AND TRAINING OF TECH STAFF					
Region	Percentage of Employees With Prior CATV Experience	Percentage of Employees With Prior Electronics Experience	Percentage of Employees Formal Electronics Training	Percentage of Employees Hired From Within CATV Community	Percentage of Employees With Adequate Tech Skills
Northeastern States	22%	54%	38%	87%	68%
Southern States	21%	57%	35%	79%	79%
Midwestern States	30%	55%	42%	76%	73%
Western/Mountain States	34%	55%	44%	80%	65%
All Systems	27%	54%	40%	80%	72%

Appalachian vocational schools are now graduating many young men with electronics skills. This is an important source of CATV technical personnel. Still the vocational graduate must be trained in the specialized skills of the CATV installer/technician---climbing, coaxial cable, frequency bandwidth, amplifier and receiving equipment, house drop installation and troubleshooting.

In response to growing needs a handful of CATV technical courses have sprung up in various parts of the country. This approach to CATV manpower needs is one which merits further investigation. With the addition of specialized courses in CATV technology added to the curriculum of Appalachian vocational schools the needs of the cable industry in the Region for a trained manpower pool on which to draw could be met.

The addition of intensive short term training courses in specifics of cable technology could also help update the skills of CATV technicians already on the job.

Production Training

Even if formal training programs in CATV technology are begun at Appalachian vocational schools, our job is only half completed. have aided the cable industry only in its familiar distribution function. The new challenge of the CATV industry, and the major concern of this study is local production of programs for distribution through the cable.

This new emphasis on "program origination" is one that many cable operators are ill prepared to cope with, but it is the great untapped resource of cable television. Program origination could include instructional programming for home and classroom; televising of local activities, such as school board or city council meetings, community drama, civic events, or local

sports; and informational and educational programming useful especially to low-income groups.

The precise coverage of a cable TV system makes it the logical medium for solving the problems of local television service and the economics of CATV also make community television possible at a drastically reduced cost.

There are several alternatives related to just exactly who in the community should be responsible for local CATV program origination. Local origination by the CATV system operator is one such alternative.

> However, to leave this function entirely in the hands of the operator would place him in competition with all other suppliers of programming who may wish to distribute their product over the CATV system. This competitive relationship may not be desirable in the long run, since the operator, seeking to maximize the value of his programming, might restrict access and therefore limit diversity.[3]

The example of local origination in Canada also is helpful in showing the limitations of program origination under operator sponsorship.

> After as much as ten years of local origination, operators of large Canadian CATV systems tend to settle for a modest level of effort with limited experimentation... The primary function becomes public relations -- maintaining favor with regulatory agencies, the government, and the public -- and the secondary function attracting new subscribers. All of these factors militate against direct community involvement and against providing an outlet for the nonconformist and the unpopular point of view.[4]

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[3]Feldman, Cable Television: Opportunities and Problems in Local Program Origination, (Santa Monica, CA: Rand Corporation, September 1970).

[4]Ibid., 20-21.

An alternative to operator sponsored origination, is placing responsibility for local origination in the hands of a broad-based community association; a citizen's communications council. Local development districts might will become the parent organization of such community councils, or at least aid in their formation. When such councils are established, they can procure their own equipment and studio space, and can produce programming effectively, this effort would satisfy FCC requirements for local origination, while providing truly grass-roots television.

Training of short duration, aimed at preparing community groups in basics of television production would be required in order to assure that local programming have at least minimal quality.

The training agency might be the cable operator. Several of the cable operators contacted at the Kentucky and Tennessee "CATV-Community Development" conference replied that they would be willing to provide technical assistance to community groups interested in program origination. Cable operators that have studio and mobile equipment could very well provide group training courses on evenings and weekends. The charge for such training could be a nominal fee adequate to reimburse the operator for the direct cost of the training program and provide a margin of profit.

Other agencies that could provide training of this kind include community colleges, universities, or a special CATV training and utilization aim of regional production organization.

ENGINEERING REPORT

This preliminary report will involve technical aspects of the production and distribution of public service programming through use of existing systems and additional interface of new systems.

Production

The production of programs can be done by film or tape or a combination of the two.

Film has one advantage over tape in that the film cameras can go into areas that would be difficult or impossible for a color TV mobile unit. On the other hand, film production is hampered by dependence on processing, editing, mix, etc. Tape has an advantage in having instant playback available and in the capability of instant editing and effects. Tape production on one level requires a small army of engineers, technicians and operators, and on the most frugal level, more people than film production.

Each mode must be evaluated on a case by case basis to determine the most effective, most expeditious and economical use for a specific production.

Film

A basic 16 mm film equipment package (camera, audio recorder, microphones, editing equipment) could be set-up for approximately $15,000. Processing, printing and mixing can be handled by any of a number of laboratories in the area.

It should be noted that of the 46 cable systems listed in the attached Survey #1 that eleven of the 46 had film origination capability. It was not determined how many of these were color-capable, but it can be assumed that the percentage is probably low. (Appendix E)

A film unit can operate out of almost any vehicle such as a station wagon.

Tape

Attached is an equipment list for a video tape mobile unit, the basic equipment being $65,000, not including a vehicle. (Appendix F)

This package represents a color quality technical capability below that of standard broadcasting but above that of the most inexpensive equipment available. The color quality capability of equipment is almost directly proportional to the capital investment. A similar unit at the highest level of quality would cost in the $500,000 range.

The two cameras listed are single tube color cameras which cost in the $9,000 range. The video tape recorder are slant track units which do not meet broadcast standards. This means that tapes recorded or played back on these units can be used on cable systems or closed-circuit systems but <u>not</u> on broadcast stations. It should be noted that at this time it is not possible to dub these tapes to broadcast standard tapes. It is possible to dub from broadcast tapes to slant track tapes.

If a dual capability of programming on broadcast stations as well as cable systems is desired, then a quad tape recorder will have to be added. A basic unit can be purchased for $25,000.

One factor which is discussed later in the distribution section is that of type compatibility. There are over fifty different slant track

tape speeds and modes in use. Selection of slant track recorders must consider this very important factor.

A vehicle for the tape unit must be of sufficient size and be air-conditioned. A vehicle such as the Clark-Cortez and costing approximately $20,000 would be ideal.

And Too

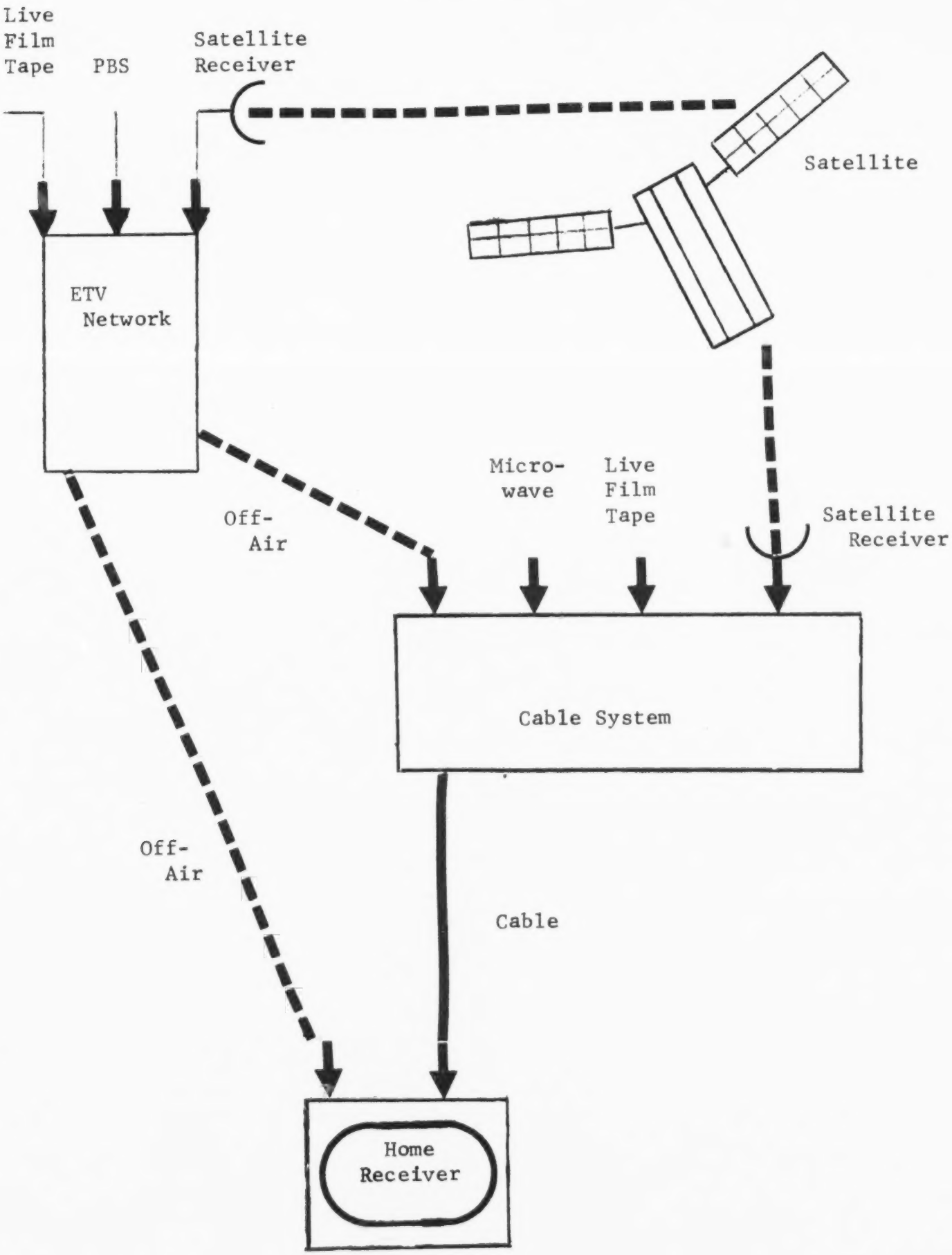
Mention must be made of the plethora of small monochrome combination camera-slant track video tape recorders available. Whereas they are low in cost and portable, they are monochrome and it is assumed that the programming will be in color. Also, the technical quality of the picture is considerably less than that of the equipment considered in this report. For these reasons, this level and kind of equipment was not considered.

Distribution, Interconnection

For the purposes of this report, the systems used to transport programs film or tape to the home receivers will be considered to be broken down into two types, Interconnection and Distribution. Interconnection systems interconnect distribution systems. Distribution systems are local in scope and Interconnection systems are area.

The attached sketch illustrates the relationships between systems and the path or paths from the program input to the home receiver.

Let us consider elements and paths.



INTERCONNECTION AND DISTRIBUTION SYSTEMS

Cable Systems

Already in existence in Central Appalachia are hundreds of cable systems ranging in size from those serving a handful of subscribers to systems serving thousands.

These systems receive commercial and educational VHF and UHF broadcast stations and distribute them to homes and schools. Their raison d'etre, of course, is the mountainous terrain of Appalachia which indiscriminately interferes with home reception of all television broadcast stations.

As will be noted from the attached Survey #2, seventeen of the thirty-seven replying have some type of origination equipment. This in some cases is a monochrome TV camera scanning a weatherboard. More elaborate facilities including color cameras and color slant track video tape recorders are in some cable systems.

Tape

One possible way of getting programs to the home receiver is to bicycle video tapes to the cable systems having video tape recorders. This method has been used for years by ETV stations to exchange programs. Other than the vagaries of the postal service, no problems have occurred because all of the stations involved used the same video tape recorder standard. This, unfortunately, is not true in the case of the cable systems. There are over fifty slant track standards in use. So tapes cannot be exchanged unless both parties have the same type and brand of recorder. In order to distribute tapes to a large number of systems, it would be necessary to have a recorder in the dubbing center for each different type in use. These recorders range from $500 to $10,000 in cost.

Microwave

One possible way of interconnecting the cable distribution systems is by the use of microwave relays.

It is possible to construct and operate in the CARS (Community Antenna Relay Service) band 12.7 - 12.95 relays to feed programs to systems. One promising system which provides multiple channels on a single transmitter-receiver system is that of Laser-Link (does not use lasers by the way). These relays are limited to 20-25 mile hops and an area wide system would run into hundreds of thousands of dollars of capital (possibly, millions). A single hop microwave relay would cost approximately $20,000.

Telephone Company

The common carriers can provide interconnection between systems. Their CATV rate is $31.50 per mile per month and extrapolation of this into an area wide system will result in a hefty operating figure. This interconnection by them uses both video cable and microwave.

Satellites and Things

One method of interconnection which holds great promise is that of satellite relay.

In the Spring of 1973, NASA will launch an experimental satellite called ATS-F. Two channels will be allocated to educational communications in the 2500 MHz band. With this system, it would be possible to go to selected receiving locations on the ground such as schools, cable systems, ETV stations, etc.

Because of the cost of the receiver-converter and the size of the receiving dish, it appears unlikely at this time and for some time to come that direct to home transmission will be possible.

Proponents of the system are claiming a $500 per receiving location. This should be considered with suspicion since present ITFS systems operating on the ground utilize 2500 Mllz and the down-converter cost of these is on the order of $1500. It should be expected that satellite transmission over longer distances will create more technical problems which may increase the cost.

Even with increased cost, it is not unrealistic to consider a sattelite receiving system as being within the reach of many cable systems.

ETV

Already existing within the area are ETV networks and stations. These are interconnected by private and common carrier supplied microwave systems. It would be possible to interconnect several of the stations and networks by microwave and/or Off-Air systems. See Appendix H) for a sketch of the ETV stations within the study area.

Most of the cable systems already carry the ETV stations (as required by the FCC). (Appendix () shows the percentage.

In the three states within the area, the stations may be programmed from single input points in each state.

All of the states have ETV production facilities which would be available for program production.

Summary

Generally, it appears that the technology is available to transport educational communications in just about any mode. There does not appear to be any single transmission method which can reach every home in Central Appalachia.

By using a combination of all of the existing systems plus satellite communications, most of the homes can be reached.

The answers to the questions and choices posed in this report depend mostly on the choice of soft ware, the intended audience and the funds available.

PROBLEMS

Funding Delays

Delays in funding have considerably effected the accomplishment of project goals in the time frame originally projected. Although work was authorized and begun on April 15, 1971, payment was delayed in Washington until mid-June. After a short processing period in Frankfort, funds became available, yet as of this writing, funds have not been requested from Frankfort by the University.

Consequently, none of the personnel working on the project, with the exception of the secretary/staff assistant, have received payment for services rendered, or reimbursement for travel, and none of the expenses incurred by the project have been paid.

More importantly, project activities had to be curtailed for lack of operative funding. For instance, planned local and national travel has repeatedly been postponed in expectation of receiving funds. The national visitation of innovative CATV systems, originally scheduled for late June, has now been re-scheduled for late September, therefore making impossible inclusion of the results of that trip in the Interim Report.

Administrative Difficulties

Complicating the funding delays and partially responsible for them, were a series of administrative problems at the University level, related to the grant structure, its method of payment, and the many procedural changes that have oocurred in the project development.

Consultant work began on April 15, with University approval, under the assumption of a direct payment system. In late June however, the University

was notified that the grant would flow through the state interaccount system. This funding change, plus other contributing factors, resulted in a directive on July 28, 1971, curtailing further project consultant work.

A considerable amount of confusion resulted from this revision in policy. Project personnel did not know if the project was to be continued, or terminated. It was, for a time, unclear if payment for services rendered would be made or denied. The uncertainty of the project status, considerably slowed completion of project objectives, especially coming as it did, immediately before the Interim Report was to be prepared.

Fortunately, the situation has now been normalized and progress on the study is running smoothly. However, the one month period lost out of the middle of the grant period might make completion of the project by its targeted date an impossibility. If warranted, an extension will be requested.

RECOMMENDATIONS

From the preceding preliminary analysis of CATV in Central Appalachia, certain conclusions about future policy can be drawn.

(1) There is wide agreement in the field that support of local origination by CATV system's does serve the public interest and should therefore be encouraged. Such divergent national organizations as the RAND Corporation, the Federal Communications Commission, the National Cable Television Association, and most recently PubliCable, a coalition of educational and public service agencies concerned with the development of cable TV, have endorsed the local origination of programs on CATV.

Representatives from the cable industry itself, namely Cypress Communications and Time-Life Broadcasting, have in recent months, formulated policies for their member systems that are highly supportive of local program origination.

In the region, the Tennessee Valley Authority has expressed interest in development of public service cablecasting, as have many cable operators and local development districts personnel contacted during the last few months. Despite the widespread interest nationally and regionally, there are also important hinderances to development and expansion of local CATV programming.

Before significant development of CATV programming by community groups in Appalachia can begin, three related problems must be solved. Those problems are: (1) lack of leadership, (2) financing and, (3) equipment.

During the balance of the grant period ways of solving these interrelated problems will be sought and reported to the Commission.

(2) Since local program origination on CATV is in the best interest of the public and should be encouraged, the Appalachian Regional Commission should be playing a much more active role in the regulatory matters that will determine the future of cable TV and therefor significantly effect the Appalachian population. For instance, the FCC's CATV rule package that is currently before Congress, will not apply to those CATV systems outside the top 100 markets. In addition to discriminating against the large percentage of the population beyond the radius of the few major metropolitan centers within the Appalachian Region, it also robs them of the public service benefits they sorely need.

The current FCC rule package will probably, however, undergo several revisions before it appears in the form of a Final Report and Order. The Congress, the CATV industry and certainly, broadcasters, will have much to say about the final form the rule package will take. The Appalachian Regional Commission would be abdicating its responsibility to serve the best interests of the people of Appalachia, if it did not file comments with the FCC on its views of the Commission's CATV rule package.

Input by the Appalachian Regional Commission should also immediately (before October 1971) be made to the Office of Telecommunications Policy's task force on CATV. A report will be issued by that Office sometime in October that will suggest long-range policies for CATV. For instance, at a meeting in Washington on August 31, 1971, Mr. Walter Hinchman, Director of OTP's CATV task force stated that his group was studying the issues of guaranteed access for reception purposes, and federal subsidies of CATV public programming.

Both of these idea's could have far reaching impact on improving communications in Appalachia. Although outside the scope of this study, it is strongly suggested that Appalachian Regional Commission should more actively foster that improvement.

(3) Since we have determined that local program origination does indeed serve the public interest, let us now look at how such community programs may be produced. To analyze that question calls for another, "which community are we interested in serving?" Will we be serving one community system or several? Local or regional? The answer for CATV is both. The differences are content treatment, technical quality, and professional commitment.

With minimal training, local production for a single CATV outlet can be done with existing, inexpensive ½inch video tape equipment by non-professional people --- that is everyday community people; civic and service groups, schools, artists, mechanics, police, firemen, and the whole gamut of educational and governmental organizations.

Lightweight portable equipment can roam the community in the hands of almost any freshly-instructed citizen and make video tapes of some uniqueness and quality sufficient for local cable television. Much of this videotape equipment is already available and in use in school systems, and in industry, across Appalachia. This equipment, plus studio facilities available at CATV systems, could be very helpful in providing the technical base on which community television can begin.

On the other hand, programs for the Region are more complicated, both for production, engineering, personnel, and distribution. The size of the coverage area and the philosophy behind television directed specifically

for Appalachia would dictate a mobile production unit. Such a unit would essentially be a TV studio-on-wheels designed to concentrate on delivering information specifically related to solving Appalachian problems, such as programs on outmigration, health care, job-retraining, Appalachian culture, pre-school and adult education, and environmental conservation.

This kind of production means professionally qualified people. People with the skills and commitment to work full time as part of a creative team, travel throughout areas of Appalachia, be comfortable with media equipment, and be able to produce programs with broader interest for the Region at large.

This quality of production, even for CATV, also calls for more sophisticated technical equipment. The need to reach many systems means at least one generation higher video equipment, (one inch or two inch VTR) and the need to reach more people means color.

We are hereby, recommending the establishment of a regional production company, with ARC Funds, that would have the skills and experience necessary to meet the challenge of producing original, uniquely Appalachian television. Such a company would work in close concert with ETV networks in all three states in mutually supportive roles, and with development districts to identify local needs for programming.

(4) To oversee the development of public service programming on CATV in the Region will be facilitated by a multi-state, multi-purpose, structure with roots in Appalachia. It would be the function of such a structure to identify, organize, and funnel fundings into local communities, in cooperation with local developments districts, to support development of

community communications councils for programming on CATV, either on a demonstration or continuous basis.

Such a center would provide a focal point of leadership for local communities interested in program origination, for communities in franchise negotiations, and for those localities in need of technical assistance.

The programming arm of such a structure would be the regional production organization discussed previously. Training of local community leadership in CATV production matters would also be part of the function of such a production unit.

Liasion with Appalachian vocational schools to begin programs for formal training of CATV technicians would be another function of the overall organization. Liasion with governmental, education, and community service groups would also be accomplished through such an Appalachian-based CATV development center.

(5) The pursuit of domestic satellite utilization for CATV interconnection in the Region is highly encouraged. The ATS satellite, to be launched in 1973, could provide an inexpensive means for interconnecting the many CATV systems throughout the Region. If the recommended CATV center and its production arm is in operation by that time, it could provide an important software input into the satellite system of interconnection. The satellite interconnect system is viewed as an entirely complementary adjunct to the CATV center and production company hereby proposed. A stationary domestic satellite would allow inexpensive networking of the Appalachian Region true, but without quality programming designed specifically for the people of the Region, it would be a meaningless exercise in technology. Although the system of program <u>distribution</u> is important, it is the <u>programming</u> which ultimately must prove itself.

WORK FORECAST

During the second half of the grant period work will continue on the major areas covered in this report. As new information becomes available the report will be revised accordingly. The "CATV Facilities Survey" will be updated as will the "Programming Survey." The "Ascertainment of Needs Survey" will gain new dimension by adding another method of determining local needs.

The "Training" and Engineering" sections of the study will be refined and finalized, by addition of data gleaned from national visitations, continued meetings with CATV operators, and the planned conference in Appalachian Virginia. The series of planning sessions in each of the six Developments Districts will also provide new information to be used in these sections.

The major area's of work left to be accomplished are threefold: (1) Development District - CATV Utilization Plan, (2) Experimental CATV Information, (3) Alternate Organizational Structures.

Development District - CATV Utilization Plan

In the remaining months of the contract period a series of meetings will be held in the Development Districts under investigation. The objectives of these meetings will be to accurately determine the particular programming needs of each district. This information will supplement the information previously gathered and found in the "Ascertainment of Needs Survey" section of this report.

The second objective will be to develop plans in conjunction with each Development District to assist that district in utilizing their local CATV system for public service programming.

Out of this series of meetings will be divised a plan which might serve as a model for utilization of CATV by other Development Districts in the Appalachian Region.

Experimental CATV Information

In order to take advantage of innovative developments and determine possible applications within the study areas of such developments, the consultant team will visit a number of CATV systems throughout the country that have been recognized as innovative.

Present plans call for visitation of systems in New York, New York; Beloit, Wisconsin; Grand Junction, Colorado; and several systems in northern and southern California. In performing there visitations the consultant team will gather information on local programming, costs of operations, technical components, mobile equipment, franchises, personnel, and other relevant data.

Alternate Organizational Structures

Intensive investigation and review of alternative organizational structures will be done during the coming months. Consultation with the projects legal counsel is planned in order to determine the best structure from the legal point of view.

Visits to the CATV systems in New York City will provide valuable insight into structure of community access channels for public service programming. Other models, such as the Tri-Cities development,

will also be closely studied. Inquiries to the FCC have already been made, related to comprehensive community control plans made known to that agency, by similar projects across the country.

The consultant team will meet in late October to review all relevant information and determine what organizational structure will be recommended to most efficiently and effectively serve the public service programming needs of the study area.

PROJECT CALENDAR - PHASE II

SEPTEMBER 10	Potential members of Ad Hoc Advisory Committee contacted and requested to serve on Committee
SEPTEMBER 13-14	Trainer and Administrator - Visit to Washington, DC to discuss training component with government agencies. Consultation with projects legal counsel on alternate organizational structures.
SEPTEMBER 21	Consultant Team Meeting in Lexington, Kentucky.
SEPTEMBER 24	Virginia CATV - Community Development Meeting.
OCTOBER 4	Planning session - Gateway Area Development District
OCTOBER 6	Planning session - Kentucky River Area Development District
OCTOBER 11	Planning session - 1st Tennessee - Virginia Area Development District
OCTOBER 12	Planning session - Upper Cumberland Area Development District
OCTOBER 17-21	National Association of Educational Broadcasting Convention
OCTOBER 25	Planning session DILINEWISCO
OCTOBER 26	Planning with yet to be chosen Area Development District in Virginia
OCTOBER 30 to NOVEMBER 7	National Visitations
NOVEMBER 10	Brief reports due in to Administrator on national visitations
NOVEMBER 15	Finals reports due in to Administrator for preparation of final report
NOVEMBER 30	Final report draft copies prepared for submission to Kentucky Program Development Office
DECEMBER 15	Submit to Kentucky Program Development Office 35 more copies of report if draft copy approved.

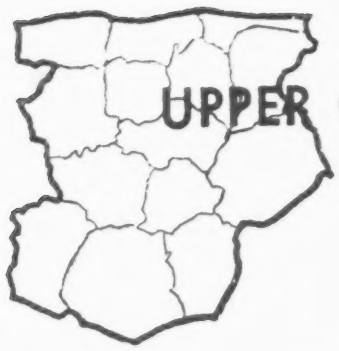
APPALACHIAN COMMUNITY TELEVISION EXPENDITURES

April 16, 1971 - August 15, 1971

A.	Direct Costs		
	1. Personnel Salaries		
	A. Consultants	$3,400.00	
	B. Secretaries	797.00	
	SUBTOTAL PERSONNEL SALARIES		$4,197.10
	2. Travel		326.31
	3. Communications		71.07
	4. Supplies		118.00
	5. Equipment		80.00
	TOTAL		$4,792.00

BREAKDOWN OF EXPENDITURES THROUGH AUGUST 15, 1971

ITEM	ALLOCATED	EXPENDED	BALANCE
1. Personnel Salaries			
A. Consultant Administrator	$3500.00	$800.00	$2700.00
B. Consultant Engineer	2000.00	600.00	1400.00
C. Consultant Trainer	1500.00	750.00	750.00
D. Consultant Financial	800.00	450.00	350.00
E. Consultant Legal	2000.00	800.00	1200.00
F. Secretary - Staff Asst.	1560.00	797.10	762.90
2. Travel			
A. Local	$1680.00	$124.00	$1556.00
B. National	2270.00	202.31	2067.69
3. Communication			
A. Telephone	$ 654.00	$ 65.65	$ 588.35
B. Postage	60.00	5.42	54.58
4. Supplies	$ 300.00	$118.00	$ 182.00
5. Equipment	$ 150.00	$ 80.00	$ 70.00
	$16,474.00	$4,792.48	$11,681.00



UPPER CUMBERLAND DEVELOPMENT DISTRICT
BOX 5076
TENNESSEE TECHNOLOGICAL UNIVERSITY
COOKEVILLE, TENNESSEE 38501
OFFICE: 332 Business Administration Bldg
PHONE: (615) 526-9229

August 24, 1971

Mr. Lamar Marchese
P. O. Box 1353
Morehead State University
Morehead, Kentucky 40351

Tilden Curry has asked us, Mr. Marchese,

. . .to cooperate with you as one of the Districts in Tennessee interested in CATV. We will be happy to do so.

Although we have very little cable television in our area, and it does not seem to be progressing at any very rapid rate, we do have hopes for the future. We want to keep abreast of what is going on and work with you in any way we can.

Donald S. Wakefield
Executive Director

DSW:lm

APPENDIX B

CATV SYSTEMS

Appalachian Sections

of

Kentucky, Tennessee, & Virginia

SYSTEM	TOTAL POPULATION	POTENTIAL SUBSCRIBERS	CURRENT NUMBER OF SUBSCRIBERS	SATURATION PERCENTAGE	CHANNELS
KENTUCKY SYSTEMS					
*Allen	1,500	350	325	(92.9)	4
Barbourville	3,211	1,200	564	(47.0)	12
Beattyville	1,000	200	175	(87.5)	3
Benham	1,900	300	273	(91.0)	5
Berea	4,302	1,000	430	(43.0)	12
Burkesville	1,688	500	448	(89.6)	5
Cumberland	5,000	1,500	1,160	(77.3)	5
Elkhorn	1,085	500	400	(80.0)	5
*Flemingsburg	2,500	800	600	(75.0)	12
Harlan	5,700	3,000	2,200	(73.3)	12
Irvine	3,000	1,000	600	(60.0)	5
*Liberty	2,200	850	720	(84.7)	8
London	4,400	1,400	1,038	(74.1)	12
Lynch	3,810	450	450	(100%)	5
Manchester	1,868	500	500	(100%)	7
Martin	3,000	350	330	(94.2)	6
Maysville	8,451	2,300	1,806	(78.5)	12
McKee	750	225	225	(100%)	5
*Middlesboro	15,000	3,950	1,450	(36.7)	12
Monticello	4,000	1,200	500	(41.7)	12
Morehead	4,390	2,000	1,300	(65.0)	12
*Mount Vernon	1,100	450	350	(77.0)	5
*Paintsville	5,800	2,000	1,400	(70.0)	5
Pineville	3,200	600	438	(73.0)	5
Prestonsburg	3,133	1,000	895	(89.5)	5
*Richmond	16,600	3,500	1,103	(31.5)	12

Source: *Broadcasting Sourcebook 1971-edition

Television Factbook 1969-70-edition

APPENDIX B (Continuation)

SYSTEM	TOTAL POPULATION	POTENTIAL SUBSCRIBERS	CURRENT NUMBER OF SUBSCRIBERS	SATURATION PERCENTAGE	CHANNELS
Salyersville	1,173	300	200	(66.0)	3
Tompkinsville	2,091	500	125	(25.0)	12
*Williamsburg	3,400	600	499	(83.2)	6
*Winchester	16,900	4,500	2,664	(59.2)	12
VIRGINIA SYSTEMS					
*Abingdon	4,758	1,500	467	(31.1)	12
Big Stone Gap	4,688	700	600	(85.0)	5
Bluefield- (VA & TN)	30,000	9,000	5,100	(56.7)	12
Bristol (VA & TN)	37,244	4,000	2,165	(54.1)	12
*Buena Vista	8,000	1,800	650	(36.1)	8
*Covington	11,000	6,300	4,200	(66.7)	12
Dante	1,250	450	285	(63.3)	5
*Galax	5,300	1,650	624	(36.8)	12
Harrisonberg	16,000	4,500	3,800	(84.4)	5
Lebanon	2,089	1,500	355	(23.7)	12
Marion	8,500	2,100	1,600	(76.2)	12
Pulaski	10,469	2,950	1,100	(37.2)	12
Richlands	4,963	2,600	1,114	(42.8)	5
*Saltville	2,844	1,086	1,043	(96.0)	12
Stauton	22,232	3,000	1,750	(58.3)	12
Tazewell	3,000	1,000	800	(80.0)	12
Waynesboro	15,694	2,778	2,189	(78.8)	12
TENNESSEE SYSTEMS					
Elizabethton	10,896	1,500	800	(53.3)	12
*Erwin	5,000	2,000	1,593	(79.6)	12
*Greenville	13,000	4,700	1,679	(35.7)	12
Harriman	5,931	2,600	1,250	(48.0)	12
Johnson City	32,375	5,000	3,300	(66.0)	12
*Kingsport	34,000	29,156	12,679	(43.0)	12
*Lafollette	7,500	1,400	850	(60.7)	7
Morristown	23,000	3,000	1,513	(50.4)	10

APPENDIX B (Continuation)

SYSTEM	TOTAL POPULATION	POTENTIAL SUBSCRIBERS	CURRENT NUMBER OF SUBSCRIBERS	SATURATION PERCENTAGE	CHANNELS
TENNESSEE SYSTEMS					
*Oak Ridge	33,000	6,000	2,000	(33.3)	10
Rockwood	5,345	1,445	417	(28.9)	12
Rogersville	3,000	500	260	(52.0)	12
*Tullahoma	15,000	1,200	900	(75.0)	12
TOTALS	511,230	142,440	55,083		
			AVERAGE	(64.4)	

Source: *Broadcasting Sourcebook CATV, (Washington, DC: Broadcasting Publications-NC, 1971).

Television Factbook, (Washington, DC: Television Digest Inc., 1969-70).

APPENDIX C

LOCAL PROGRAM ORIGINATION IN STUDY AREA

TENNESSEE

1. Gatlinburg	Film and live origination
2. Johnson city - Kingsport - Bristol	Beginning local live with community advisory board.
3. Morristown	Live origination
4. Newport	Local live origination
5. Oak Ridge	Local live origination/ties in with high school

KENTUCKY

1. Corbin	One hour live per week
2. Cumberland	Local live and film
3. London	Local live origination
4. Middlesboro	Film origination two hours per week Live origination three hours per week
5. Morehead	Intermittent origination - no regular schedule
6. Russell	Film origination 84 hours per week Beginning local live.

VIRGINIA

1. Pulaski	Local live four hours per week

APPENDIX D

SAMPLE QUESTIONNAIRE FORM

CATV - COMMUNITY DEVELOPMENT QUESTIONNAIRE

Name of Respondent_____

Business Address_____

_____

Business Phone_____

Name of Organization_____

Title in Organization_____

A. COMMUNITY NEEDS

(1) What is the most pressing problem facing your community?

_____

_____

_____

(2) What other significant problems are facing your community?

_____

_____

_____

(3) What do you consider are Eastern Kentucky's most pressing problems?

_____

_____

_____

APPENDIX D (Continuation)

(4) Do you feel that the problems of Eastern Kentucky are shared by the rest of the Appalachian Region? Please Explain--

_____

_____

_____

B. PROGRAMMING NEEDS

(5) Do you think the media (TV, Radio, Newspapers) in your community are doing an adequate job of informing the public about local issues and problems?

_____

(6) Do you think that local program origination by cable TV systems could aid in the solution of local problems?

_____

(7) (If you answered YES to question six) How can cable TV help in dealing with these local problems?

_____

_____

_____

(8) Listed below are several types of programs that a local CATV system might produce. Rank them by placing 1, 2, 3, 4, or 5 next to the letters in the order which you feel are most important. For example, if you think A is most important put a 1 beside it, if you choose D as the second choice put a 2 beside it and so on.

_____ A. Local News
_____ B. Coverage of governmental meetings (city council, etc.)
_____ C. Local Sports (high school, little league)
_____ D. Instructional Programs ("How To", Adult Education)
_____ E. Public Affairs (election returns, special issues, telethons)

APPENDIX D (Continuation)

(9) Name several other types of cable TV programs that you think would be helpful in solving the problems of your community?

_____

_____

_____

C. DEVELOPMENT DISTRICTS (To be answered by Development District personnel)

(10) What problems do you foresee in developing TV programs in conjunction with CATV systems within your District?

_____

_____

_____

_____

(11) Would short seminars for your staff production techniques for cable TV be helpful in overcoming the problems mentioned above?

_____

_____

_____

(12) Would on site technical assistance in programming, utilization and production be helpful in stimulating your Development District to begin CATV programming?

_____

D. CATV (To be answered by CATV owners/operators/staff)

(13) Are you now originating local community service programming?

_____

(14) Do you plan to begin local program origination in the near future?

_____

APPENDIX D (Continuation)

(15) Would your system look favorably upon working with Development Districts to produce CATV programming designed to meet the developmental and educational needs of your area?

_____

_____

_____

(16) Besides Development Districts, which community groups in your locale do you think would be interested in using your facilities for program origination?

_____

_____

_____

(17) Would you provide technical assistance to community groups for program origination?

_____

_____

(18) Would you be interested in participating in a regional cable television network?

_____

_____

_____

(19) Would you be interested in programming by an outside community service agency, in exchange for free cable time?

_____

_____

APPENDIX D (Continuation)

(20) Where do you now get your technical personnel?

_____

_____

(23) Do you have difficulty in acquiring trained technical personnel?

_____

_____

APPENDIX E

SYSTEMS WITH ORIGINATION CAPABILITY - JUNE, 1971

STATE - KY	AUTOMATED CAPABILITIES						PROGRAM ORIGINATION CAPABILITIES					
	WEATHER	NEWS TICKER	STOCK TICKER	OTHER	ADS	DATE PLANNED	SLIDES	FILM	VTR	LIVE	ADS	DATE PLANNED
KENTUCKY CABLE T. V. MAIN ST. CAMPBELLSVILLE, KY.	YES				YES							/ /72
OHIO VALLEY CABLEVISION INC. 603 HIGHLAND AVE. CARROLLTON, KY. 41008	YES				YES							
CUMBERLAND T. V., INC. 114 MYERS ST. CUMBERLAND, KY. 40823									YES	YES		
CONSOLIDATED TV CABLE SERV. 323 ANN ST. FRANKFORT, KY. 40601	YES				YES		YES	YES	YES	YES	YES	
COMMUNITY SERVICES INC. 325 ANN ST. FRANKFORT, KY. 40601									YES	YES		
GLASGOW CABLEVISION, INC. 214 W. MAIN ST. GLASGOW, KY. 42141	YES	YES			YES		YES		YES	YES	YES	
KENTUCKY CABLE T. V. MAIN ST. GREENVILLE, KY.	YES				YES							
R V CABLE-VISION, INC. 108 NORTH GREENVILLE ST. HARRODSBURG, KY. 40330	YES			YES						YES		
HOPKINSVILLE CABLE TV, INC. 614 N. MAIN ST., PO BOX 753 HOPKINSVILLE, KY. 42240	YES									YES		
KENTUCKY CABLE T. V. 214 WEST MAIN ST. GLASGOW, KY. 42141	YES				YES						YES	
CITY SERVED - HORSE CAVE												
LEBANON CABLE TV CO., INC. 243 WEST MAIN ST. LEBANON, KY. 40033				YES								
KENTUCKY CABLE T. V. NORTH MULLBERRY ST. ELIZABETHTOWN, KY.	YES				YES							
CITY SERVED - LEITCHFIELD												
MADISONVILLE CABLEVISION CO. 52 SOUTH MAIN ST. MADISONVILLE, KY. 42431	YES				YES							04/01/71

APPENDIX E (Continuation)

SURVEY NO. 1

SYSTEMS WITH ORIGINATION CAPABILITY - JUNE, 1971

STATE - KY	AUTOMATED CAPABILITIES: WEATHER	NEWS TICKER	STOCK TICKER	OTHER	ADS	DATE PLANNED	PROGRAM ORIGINATION CAPABILITIES: SLIDES	FILM	VTR	LIVE	ADS	DATE PLANNED
MAYFIELD CABLEVISION CO., INC. 607 W. BROADWAY MAYFIELD, KY. 42066	YES											
MIDDLESBORO CATV SYSTEM INC. 2119 CUMBERLAND AVE. MIDDLESBORO, KY. 40965	YES			YES	YES		YES	YES	YES	YES	YES	
MOREHEAD TV CABLE CO. 113 N. WILSON MOREHEAD, KY. 40351	YES			YES					YES	YES		04/ /71
MOUNT STERLING ANTENNAVISION PO BOX 303, 42 E. MAIN ST. MOUNT STERLING, KY. 40391				YES						YES		
MURRAY CABLEVISION CO., INC. 105 N. 5TH MURRAY, KY. 42071	YES											
TV CABLE CORP. BROADWAY PAINTSVILLE, KY. 41420	YES											
PRINCETON CABLEVISION CO. 103 EAST GREEN PRINCETON, KY. 42445	YES											
TELEVISION RECEPTION CORP. 113 W. MT. VERNON ST. SOMERSET, KY. 42501	YES											
CITY SERVED - PULASKI COUNTY												
KENTUCKY CABLE T. V. NEW WALLACE BLDG. RICHMOND, KY.	YES				YES							/ /72
TELE-CEPTION OF WINCHESTER 116 S. MAPLE ST, PO BOX 235 WINCHESTER, KY. 40391	YES									YES		

APPENDIX E (Continuation)

SYSTEMS WITH ORIGINATION CAPABILITY - JUNE, 1971

STATE - TN	AUTOMATED CAPABILITIES					PROGRAM ORIGINATION CAPABILITIES					
	WEATHER	NEWS TICKER	STOCK TICKER	OTHER	ADS	DATE PLANNED	SLIDES	FILM	VTR	LIVE	ADS	DATE PLANNED
BRISTOL CABLEVISION 1304 N. STATE ST. BRISTOL, TN. 37620	YES							YES	YES	YES		09/ /71
COLUMBIA TV CABLE 207 N. 7TH ST. COLUMBIA, TN. 38401					YES				YES	YES		
FAYETTEVILLE COMMUNITY TV 200 WEST MARKET ST. FAYETTEVILLE, TN. 37334	YES											
JACKSON COMMUNITY ANTENNA INC. 1019 CAMPBELL JACKSON, TN. 38301	YES			YES	YES		YES	YES	YES	YES	YES	
JOHNSON CITY TV CABLE CO. 407 N. WALNUT ST. JOHNSON CITY, TN. 37601	YES											
CYPRESS CABLE TV OF KINGSPORT 235 E. CHARLEMONT KINGSPORT, TN. 37660	YES				YES		YES	YES	YES	YES	YES	
LAWRENCEBURG CABLE TV 502 NORTH LOCUST ST. LAWRENCEBURG, TN. 38464	YES											
CLEAR VISION TV CO. CHURCH ST. LEXINGTON, TN. 38351	YES								YES	YES		
MORRISTOWN CABLE TV 210 S. HILL ST. MORRISTOWN, TN. 37814	YES				YES				YES	YES	YES	
MIDDLE TENNESSEE CATV 1001 MINERAL WELLS RD. PARIS, TN. 38242	YES											
PULASKI CABLE TV 130 NORTH 2ND ST. PULASKI, TN. 38478	YES				YES							
COFFEE COUNTY CATV 217 N. ATLANTIC TULLAHOMA, TN. 37388	YES				YES							06/ /72
CLEAR VISION TV CO. OF TENN. 311 S. SECOND ST. UNION CITY, TN. 38261	YES				YES							

APPENDIX E (Continuation)

SYSTEMS WITH ORIGINATION CAPABILITY - JUNE, 1971

PAGE VA- 1

STATE - VA	AUTOMATED CAPABILITIES						PROGRAM ORIGINATION CAPABILITIES					
	WEATHER	NEWS TICKER	STOCK TICKER	OTHER	ADS	DATE PLANNED	SLIDES	FILM	VTR	LIVE	ADS	DATE PLANNED
	YES			YES	YES		YES	YES	YES	YES	YES	
JEFFERSON CABLE CORP. 324 W. MAIN CHARLOTTESVILLE, VA. 22901												
CABLEVISION OF VIRGINIA, INC. 356 W. MAIN ST. COVINGTON, VA. 24426	YES											
DANVILLE CABLEVISION CO. 560 PATTON ST. DANVILLE, VA. 24541	YES	YES	YES	YES	YES		YES	YES	YES	YES	YES	
HARRISONBURG TRANS VIDEO 1780 SOUTH MAIN ST. HARRISONBURG, VA. 22801	YES											
MARTINSVILLE CABLEVISION INC. 111 EAST MAIN ST. MARTINSVILLE, VA. 24112	YES				YES	09/ /71		YES	YES	YES	YES	09/ /71
HAMPTON ROADS CABLEVISION CO. 10105 JEFFERSON AVE. NEWPORT NEWS, VA. 23605	YES				YES		YES	YES	YES	YES	YES	
RESTON TRANSMISSION CO. 1614 CHIMNEY HOUSE RD. RESTON, VA. 22070	YES				YES	05/01/71	YES	YES	YES	YES	YES	
STAUTON VIDEO CORP. 308 N. CENTRAL AVE. STAUNTON, VA. 24401	YES						YES	YES	YES	YES	YES	04/ /71
JEFFERSON CABLE CORP. 417 NORTH DELPHINE AVE. WAYNESBORO, VA. 22980	YES				YES				YES	YES	YES	05/01/71
WYTHVILLE TELECABLE 140 SOUTH FIRST ST. WYTHVILLE, VA.	YES											

PT-603
(0671)

APPENDIX F

BASIC SYSTEM #3

COMPACT COLOR TELEVISION STUDIO PACKAGE

(2) PK-730A Color Studio Cameras

(1) PFS-710A Color Film System

(1) RCA 870C Color Video Tape Recorder

(1) RCA 800AC Color Video Tape Recorder

(1) VS-153A Video Switcher

(1) PAM-1 Audio Mixer

(1) PTC-2 Console

(1) Lighting Package

BASIC EQUIPMENT PRICE: $64,650.42

SCHEDULE A

APPENDIX F (Continuation)

MINOR	ITEM	QUANTITY	M. I	DESCRIPTION AND UNIT PRICE		AMOUNT	ESTIMATED DELIVERY DATE
				BASIC SYSTEM #3			
				Video Equipment			
	1	2	MS-7105	PK-730A Color Studio Camera System with Compatible Encoder (Shipped strapped for Internal Drive) including:			
	1a	2	599035	PK-730A Color Camera & Terminal Electronics	@ 8890	$17,780.00	
	1b	2	48057	6:1 Zoom Lens 50-300mm, f4.5 with control cables (Equivalent to 20-120mm Lens in 16mm format, minimum focus distance 8.5 ft.)	@ 1500	3,000.00	
	1c	2	48033-A	Remote Control Panel (½ width)	@ 225	450.00	
	1d	2	26725-E9	50' Camera Cable with right angle Male Connector	@ 205	410.00	
	1e	2	48188-50	50' Remote Control Cable	@ 80	160.00	
	2	2	599043	PCL-1 Cam Link Head	@ 280	560.00	
	3	2	48139	PT-3 Heavy Duty Tripod	@ 232	464.00	
	4	2	48140	PD-3 Heavy Duty Dolly	@ 125	250.00	
	5	1	47792-A	Rack Mounting Adaptor for PTV Remote Conrol Panels (Holds 2 PK-730A Remote Control Panels)		30.00	
	6	1	MS-7101	Self-contained PFS-710A Color Film System with RCA Film Projector, Kodak Slide Projector and Compatible Color Encoder (Shipped strapped for Internal Drive), Including:			
	6a	1	599053	PFS-710A Color Film Camera System		9,160.00	
	6b	1	599056	RCA PFP-1600 16mm TV Film Projector with 2½" Lens		1,340.00	
				NOTE:			
				1. Remote Control System not available for PFS-710A.			
				2. PFS-710A with internal encoder is shipped strapped for internal drive, etc. Changing strapping from internal to external or external to internal can easily be accomplished by customer in the field.			

BC 944

RCA No._____

SCHEDULE A

PT-603
(0671)

APPENDIX F (Continuation)

MINOR	ITEM	QUANTITY	M. I.	DESCRIPTION AND UNIT PRICE	AMOUNT	ESTIMATED DELIVERY DATE
	7	1	48046	Color Test Film	27.00	
	8	1	557342	Test Slide Set (Monochrome)	60.00	
	9	1	591182	Model 800AC Color Video Tape Recorder in Portable Case (includes Speaker and Service Manual)	4,700.00	
	10	1		Model 870C Color Video Tape Recorder with Insert/Assemble Edit in Portable Case (includes Speaker and Service Manual)	8,000.00	
	11	2		Model 4009 Remote Control Panel with 25' Cable for 800 Series (Specify Rack Mount) @ 200	400.00	
	12	2	47977	Utility Cart with Casters (Holds Model 800 Series Video Tape Recorder) @ 85	170.00	
	13	1		VS-153A Video Production Switcher (See page 4 for description)	2,895.00	
	14	1	47985	PTC-2 Double Width Console	490.00	
	15	1	47865	PSG-2 Sync Generator	1,095.00	
	16	3	47765	PDA-10 Pulse Distribution Amp @ 285	855.00	
	17	4	47766	PVD-1 Pulse Variable Delay Line @ 275	1,100.00	
	18	1	47751-C	PDA-2A Subcarrier Distribution Amp	300.00	
	19	3	47862	PDA-3 Video Distribution Amp @ 300	900.00	
	20	3	47752-A	PRA-2 Mounting Shelf @ 45	135.00	
	21	4	47945	PME-9N 9" Monitor Chassis @ 220.	880.00	
	22	2	47946	PMM-11 Rack Hanger for 2 PME-9N Monitors @ 45	90.00	
	23	1		Mark 21 RM Waveform Monitor	995.00	
	24	1		Mark II-502 Image Enhancer	3,940.00	
	25	1	47807	PX-23C 23" Video Monitor	360.00	
	26	2	599101	PMC-23C 23" Color Monitor @ 325	650.00	
	27	1	47792-A	Rack Adaptor	30.00	
	28	2	47968	1 3/4" Vented Blank Panel @ 21	42.00	

RCA No._____

SCHEDULE A

PT-603
(0671)

APPENDIX F (Continuation)

MINOR	ITEM	QUANTITY	M. I	DESCRIPTION AND UNIT PRICE	AMOUNT	ESTIMATED DELIVERY DATE
				Video Equipment Sub-Total	$61,718.00	
				AUDIO & INTERCOM EQUIPMENT		
	29	1	586000	PAM-1 Audio Mixer	525.00	
	30	1	586002	Rack Adaptor for PAM-1 (Mounts PAM-1 in Console)	35.00	
	31	2	11024	BK-12A Lavalier Microphone @ 85	170.00	
	32	1	11712	Bridging Transformer	28.00	
	33	1	47960	Audio Interphone Panel (¼ Width) (for Camera Intercom)	170.00	
				NOTE: Up to four headsets may be used in system with MI-47960 interphone panel. For larger systems use MI-11784-A Type Interphone System.		
	34	3	11743	Single Headset Assembly @ 46	138.00	
	35	1	3537	PS-24 24VDC Power Supply	210.00	
	36	1	11597-D	BR-22D Mounting Shelf (Mounts Item 35)	41.00	
				Audio Equipment Sub-Total	$1,317.00	
				LIGHTING EQUIPMENT		
	37	1		Porta-Studio, per attached Schedule PT-530	$1,615.42	
				BASIC SYSTEM #3 EQUIPMENT TOTAL	$64,650.42	
				NOTE: Includes major hardware items only. Does not include test equipment, miscellaneous cables, coax cables, terminal boards, audio monitor amplifiers, speakers, etc. See Optional Items for Assembly/ Wire/Test and On-Site Assistance.		

APPENDIX F (Continuation)

MINOR	ITEM	QUANTITY	M. I.	DESCRIPTION AND UNIT PRICE	AMOUNT	ESTIMATED DELIVERY DATE
				OPTIONAL ACCESSORIES		
	38	1	47987	Set of 4 Casters for PTC-2 Console	75.00	
				For 10:1 Camera Zoom Lens, Delete Item 1b and add Item 39.		
	39	2	599069	10:1 Zoom Lens, RTH Varatol XX @ 4750 40-400mm, f5.6 with control cables. (Equivalent to 16-160mm Lens in 16mm format, min. focus distance 4.0 ft.)	9,500.00	
	40	1	47977	Utility Cart (Holds PX-23C Studio Monitor, etc.)	85.00	
	41	2		Type 5500 Color Corrector @ 3750	7,500.00	
	42	1	CB	Assemble, Wire, and Test as a complete operating system, including necessary cables, terminal blocks, miscellaneous small hardware, etc.	5,675.00	
	43	1	CB	On-Site Installation Supervision @$190.00 per day plus Travel and Living Expenses		

VS-153A SWITCHER DESCRIPTION (Item 13)

11 Inputs - Self-Contained

Inputs: 6 All composite or all N/C
5 Composite (Synchronous or non-sync)

Busses: EFFECTS A
EFFECTS B
C BUS
COMPOSITE PREVIEW
COMPOSITE PROGRAM

Note: Switcher includes program output mixer fed from EFFECTS and "C" busses.

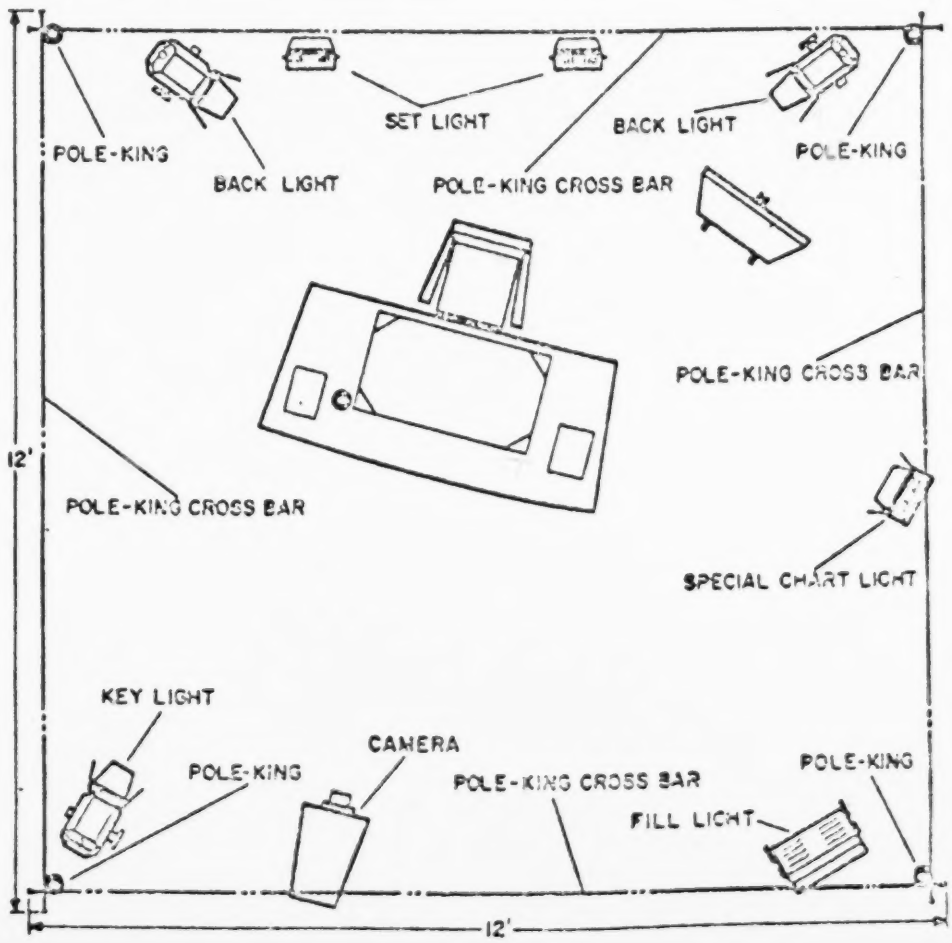
APPENDIX F (Continuation)

Product Responsibility: R.E.Smith

ITEM	QTY.	M.I.	DESCRIPTION		PRICE	CODE
			PORTA STUDIO, 115 VOLT			
			Total Connected Load 69.5 Amps @115V			
			The "Porta Studio" Kit provides adequate lighting for a monochrome or color set area of 12' x 12'. The kit includes spring loaded vertical supports and sectioned cross members so that lighting can be ceiling-mounted without bolting or otherwise securing equipment to floors or ceilings. Entire kit packs into 3 carrying cases Packed weights are 64 lbs., 64 lbs. and 125 lbs.			
			Lighting Equipment			
	4	100-051	Vari-10	@ 89.00	$356.00	B
	4	118-013	4-Leaf Barndoors	@ 19.00	76.00	B
	4	k76-038	1000W, 3200°K, 500 hr. Quartz Lamp, Frosted	@ 27.38	109.52	B
	2	104-041	Multi-Broad	@ 84.00	168.00	B
	2	120-007	Diffusion Frame	@ 5.50	11.00	B
	2	176-022	1000W, 3200°K, 500 hr. Quartz Lamp, Frosted	@ 15.25	30.50	B
	1	104-011	Mini-10	@ 49.95	49.95	B
	1	176-022	1000W, 3200°K, 500 hr. Quartz Lamp, Frosted	@ 15.25	15.25	B
	2	108-001	Set Light	@ 54.90	109.80	B
	2	176-024	500W, 3200°K, 500 hr. Quartz Lamp, Frosted	@ 14.50	29.00	B
			Mounting Equipment			
	4	164-003	Pole King for ceiling height 13'9"(Extends from 52" to 13'9")	@ 26.00	104.00	B
	12	164-005	39" Cross Member	@ 3.90	46.80	B
	8	164-012	Double Clamp for Fastening	@ 7.20	57.60	B

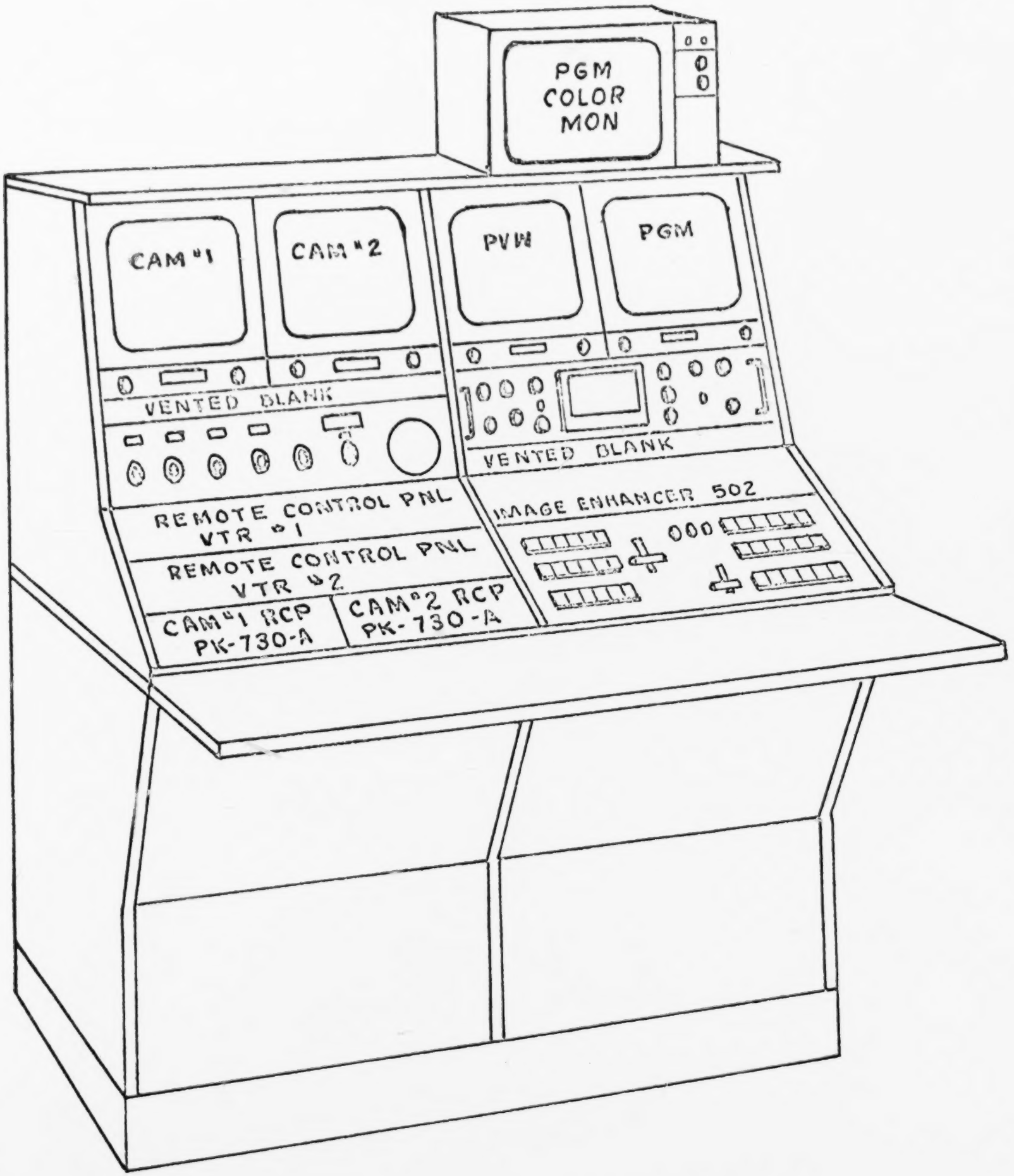
APPENDIX F (Continuation)

ITEM	QTY.	M.I.	DESCRIPTION		PRICE	CODE
	4	164-008	Straight Arm, 12"	@ 6.10	24.40	B
	4	164-010	Elbow, 6" Horiz.,5" Vert.	@ 7.50	30.00	B
	2	164-014	3" Stud	@ 8.90	17.80	B
	2	164-013	Hook, for seamless roll Paper	@ 8.90	17.80	B
			Miscellaneous Equipment			
	1	138-004	Diffusion Material, 10 yd. X 48"	@ 12.00	12.00	B
	3	142-215	Outlet box with two 15 amp receptacles & two switches, 25 ft cable (12/3 S.O.) with parallel blade u-ground connector.	@ 62.50	187.50	B
	2	148-001	Carrying case (For Lighting & Miscellaneous) 44" x12¼" x16"	@ 46.50	93.00	B
	1	148-009	Carrying case (For Mounting Equipment) 54" x 10" x 12"	@ 69.50	69.50	B
				Total	$1,615.42	

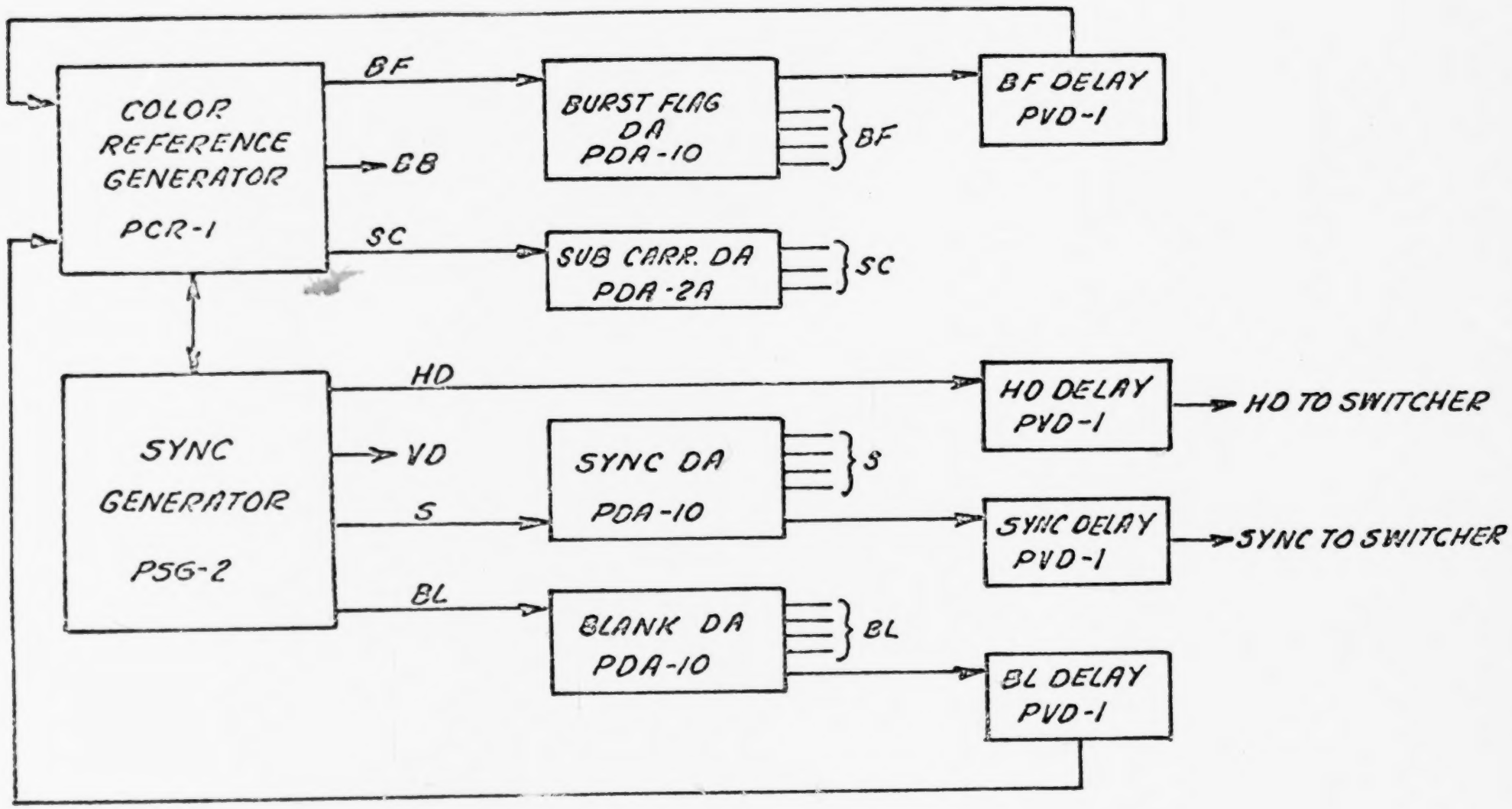


PT-603
(0671)

APPENDIX F (Continuation)



CONSOLE LAYOUT
BASIC SYSTEM #3



NOTE: BURST FLAG & BLANKING DELAYS
REQUIRED TO PROPERLY TIME
BLACK BURST SIGNAL FROM PCR-1
COLOR REFERENCE GENERATOR

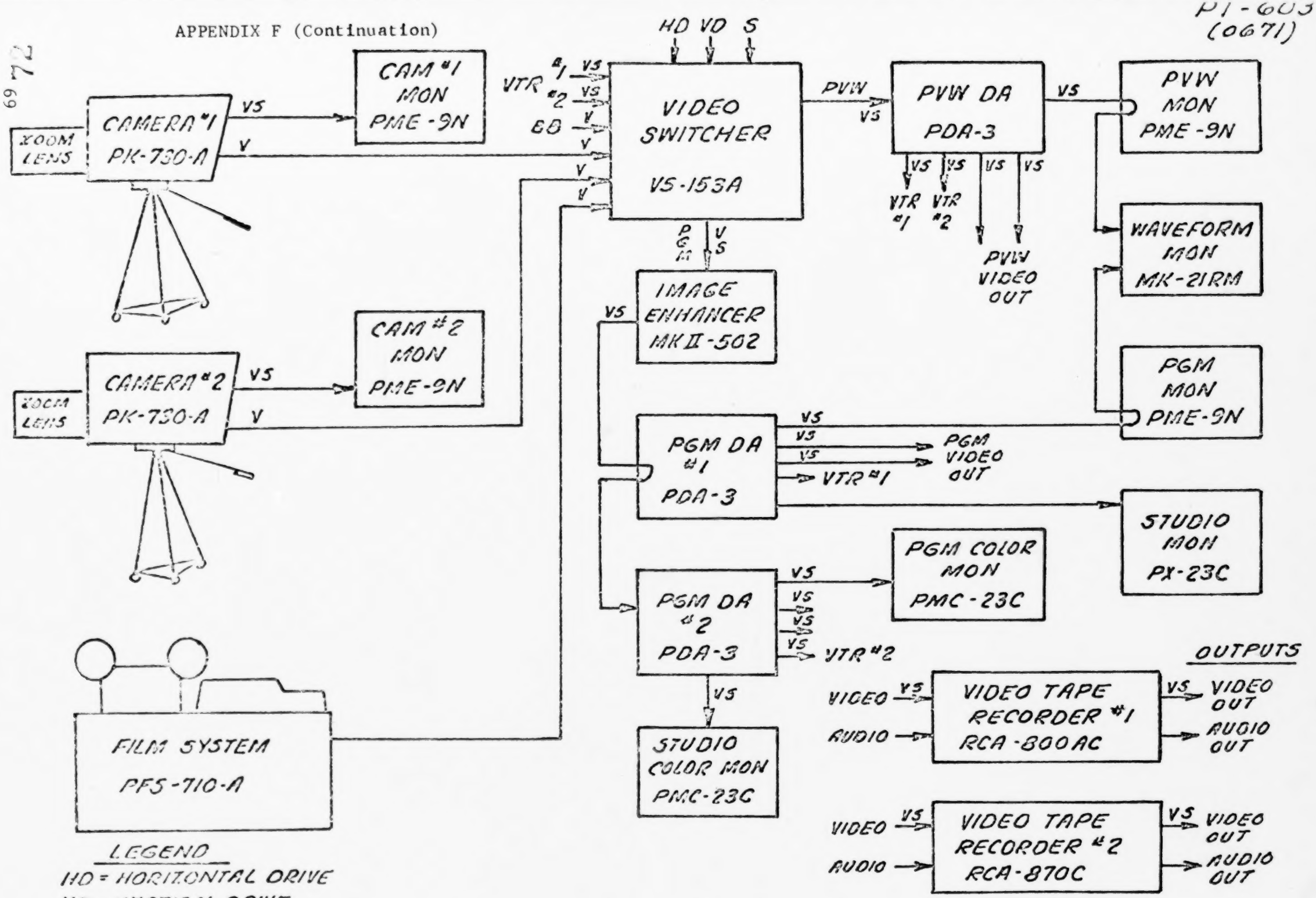
PULSE SINGLE LINE

BASIC SYSTEM #3

APPENDIX F (Continuation)

PI-603
(0671)

69 72



LEGEND

HD = HORIZONTAL DRIVE
VD = VERTICAL DRIVE
S = SYNC
BL = BLANKING
V = VIDEO (NON-COMPOSITE)
VS = VIDEO (COMPOSITE)
SC = SUB CARRIER
BB = BLACK BURST

VIDEO SINGLE LINE

BASIC SYSTEM #3

APPENDIX G

NAME OF COMPANY	USE KET.	CHA. USING.	VIDEOTAPE EQUIP.
Collins TV Cable			No
Cloverfork CATV, Evarts, KY	No (plans for 71-72 school year)		
Morehead TV Cable Co.*	Yes	38	Yes 1"
Princeton Cablevision Co.*	Yes	35	No
TV Cable Corp.* Paintsville, KY	Yes	39	No
Akers Cable System* Martin, KY	Yes	22	Yes ½"
Hopkinsville TV Cable Corp.	Yes	35	No
Harlan Comm. Television*	Yes	29	No
King Mountain Cable Corp. Williamsburg	Yes	29	No
Cumberland TV Cumberland, KY	Yes	22	Yes 1"
Commonwealth Cable Co. Somerset, KY	Yes	29	No
Mt. Vernon TV Cable	Yes	46	No
Consolidated TV Cable Co. Frankfort, KY	Yes	29	No
London Community TV	Yes	29	No
Middlesboro Cable TV	Yes	29	Yes 1"
R. V. Cable-Vision Inc.* Harrodsburg, KY	Yes	46	No
Cablevision Co., Maysville, KY	Yes	38	No
Glasgow Cable TV*	Yes	23	No
Glasgow Cable*	Yes	23	Yes
Webster All Channel Cable-vision Providence, KY	Yes	35	No
Flanery & Dingus TV* Prestonsburg, KY	Yes	22	No
Southern Cable Corp. Corbin, KY	Yes	29	No
Lynch TV, Inc.* Lynch, KY	Yes	35	Yes ½"
Kentucky Cable TV Inc.* Cambellsville, KY	Yes	23	No
Kentucky Cable TV Inc.* Richmond, KY	Yes	46	No

Appendix G (Continuation)

NAME OF COMPANY	USE KET.	CHA. USING.	VIDEOTAPE EQUIP.
Monticello Cable Co.	Yes	29	No
Liberty TV Co.*	Yes	29	No
Community Service*, Frankfort, KY	Yes	52	Yes 1"
Lawson Springs TV Cable	Yes	35	No
Benton Television*	Yes	21	Yes 1"
Tele-Ception of Winchester	Yes	46	No
Burton Antenna Co. Wheelwright, KY	Yes	22	No
Reception Co. of Somerset	Yes	29	No
Murray Cablevision	Yes	21	No
Mayfield Cablevision	Yes	21	No
Danville Cablevision	Yes	46	1 channel allocated to school system
Elkhorn City Cablesystem	Yes	22	No

KET--(Kentucky Educational Television)

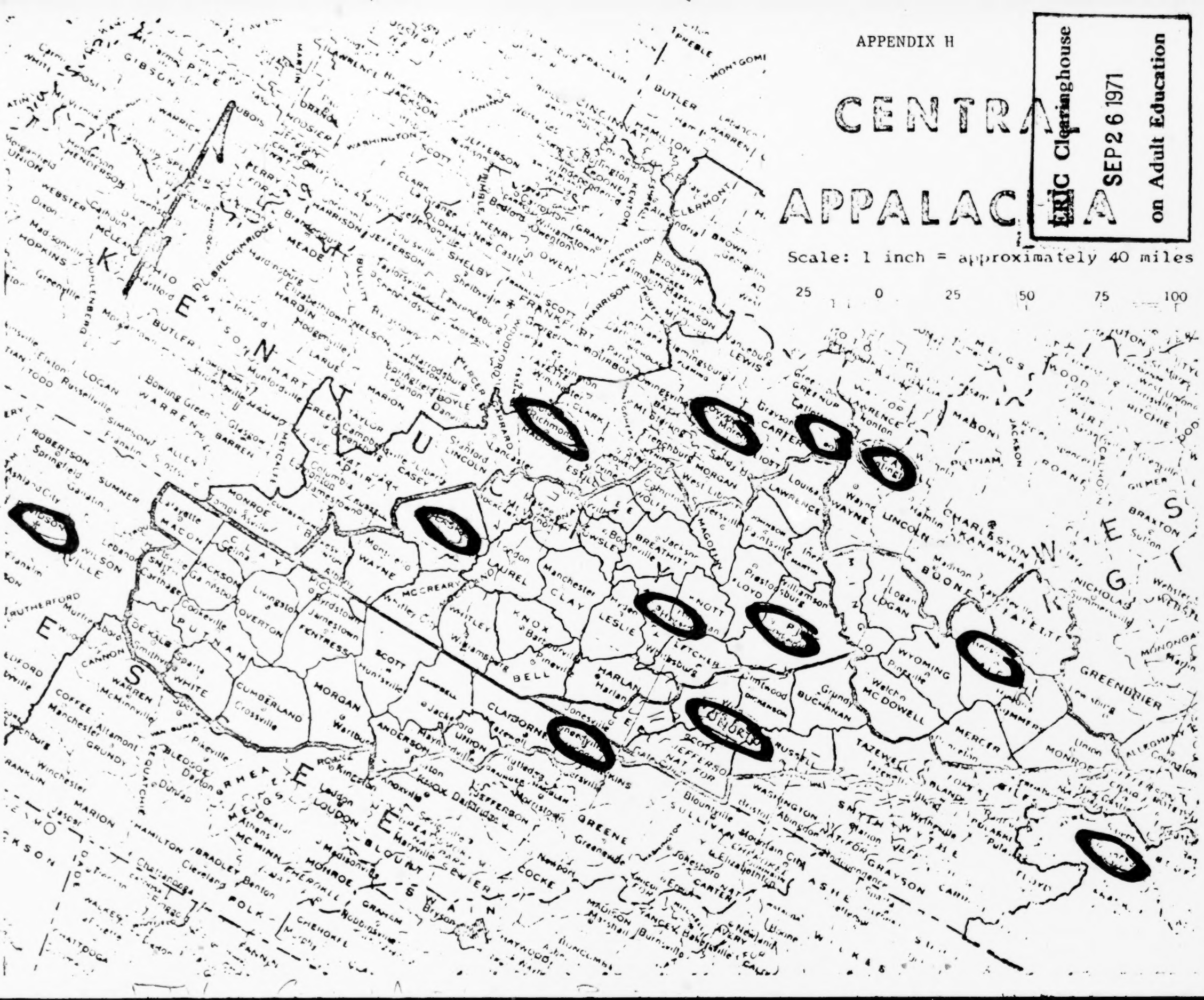
APPENDIX H

CENTRAL APPALACHIA

ERIC Clearinghouse on Adult Education
SEP 26 1971

Scale: 1 inch = approximately 40 miles

25 0 25 50 75 100


KENTUCKY
TENNESSEE
WEST VIRGINIA
VIRGINIA
HENDERSON
DAVIESS
HOPKINS
MUHLENBERG
BUTLER
WARREN
BARREN
LOGAN
SIMPSON
ALLEN
TODD
CHRISTIAN
TRIGG
CALDWELL
LYON
MARSHALL
GRAVES
CALLOWAY
MARION
CRITTENDEN
UNION
WEBSTER
HENDERSON
OHIO
BRECKINRIDGE
GRAYSON
MEADE
HARDIN
LARUE
TAYLOR
GREEN
CASEY
LINCOLN
GARRARD
MERCER
BOYLE
MARION
NELSON
WASHINGTON
SPENCER
JEFFERSON
BULLITT
OLDHAM
TRIMBLE
HENRY
SHELBY
FRANKLIN
SCOTT
OWEN
GRANT
HARRISON
BOURBON
CLARK
MADISON
ESTILL
POWELL
LEE
WOLFE
MAGOFFIN
BATH
MONTGOMERY
MORGAN
ELLIOTT
CARTER
LEWIS
MASON
BROWN
CLERMONT
HAMILTON
BUTLER
WARREN
GIBSON
PIKE
DUBOIS
JACKSON
JEFFERSON
JENNINGS
WASHINGTON
SCOTT
HARRISON
CRAWFORD
PERRY
BRECKINRIDGE